REMARKS

Claims 1-10 are of record.

The Abstract has been corrected as suggested by the Examiner.

Amendments are proposed to Figures 1, 3 and 8 of the drawings to indicate that the "measured optical circuit" (6 and 104) has a reflecting point. This typically is an integral part of the measured optical circuit. The reference sign KL has been, as described in the specification, added to Figs. 3 and 8.

Claim 4 has been amended to correct the error noted by the Examiner.

The purpose of the invention is to provide a reflectometer that has a high spatial resolution in the measurement of reflectance even though the spatial optical path length for the propagation of the local beams is varied. The invention provides two types of a compensator means to solve this problem which causes a difference between chromatic dispersion of measurement beams in a first optical path toward a measured optical circuit including a reflecting point and a second optical path of possible varying length in which local beams travel.

The first type of compensator is a dispersion shifted fiber (DSF) in the first optical path (see Fig. 3). The second type is one of an adjuster for adjusting the value of a full width at half maximum of the spectrum of the beams output from the light source and an optical bandpass filter that restricts the output of the beams from first the light source into a prescribed range of wavelengths.

Claim 1 is rejected as anticipated by Swanson, U.S. 5,459,570. Claim 1 is broadly directed to the compensator.

The Swanson reference teaches that optical media having 'pre-known' group delays are arranged to compensate for the group delay dispersion. Swanson teaches that the fiber in the reference side should be reduced in order to subsequently introduce excessive high dispersion media. From this point of view, the Swanson reference may consider addition of media suitable for fiber dispersion in the reference side. In contrast, the subject invention the compensator is

used for the purpose of reducing the dispersion value thereby compensating for variations in the spatial length of the reference side. This is a novel and advantageous idea that cannot be regarded as being obvious from Swanson. Therefore, the subject invention as set forth in claim 1 is quite unique compared with the Swanson reference and is patentable thereover.

Claim 2 is rejected over the combination of Swanson in view of Gnauck, U.S. 5,303,079. Claim 2 depends from Claim 1 and sets forth that the compensator is a dispersion shifted fiber (DSF) located in the first optical path (measurement side).

The Gnauck patent is cited for its teaching of a DS. But Gnauck's DSF is not used in the same configuration or for the same purpose as the DSF of claim 2. As discussed in the paragraph above, the Swanson patent does not teach or suggest the basic idea of compensating for the dispersion produced when the local beam passes through the spatial optical path of the reflecting means. Therefore, the contribution of the two patents does not teach the novel subject matter of claim 2 and this claim is clearly patentable.

Claims 3 and 4 are rejected as unpatentable over Swanson in view of Suzuki, U.S. 6,005,702. Claim 3 depends from claim 1 and recites that the compensator is an adjuster that adjusts the spectrum of the beams output from the light source while claim 4 also depends from claim 1 and recites that the compensator is a bandpass filter. The Examiner relies on Suzuki for its teaching of both the adjuster and bandpass filter.

As discussed above, Swanson does not teach or suggest the subject matter of claim 1.

The Suzuki reference teaches elimination of non-soliton components causing unwanted chromatic dispersion (or wavelength dispersion) with interfering long-distance soliton transmission. In contrast, the subject invention actualizes optimization upon controlling of bandwidths so as to cope with the tradeoff for the expansion of the spatial resolution due to the chromatic dispersion and for the expansion of the spatial resolution due to the bandwidth limitation. That is, the subject invention clearly differs from the Suzuki reference in the technological purpose, object, and effect. Therefore, it could not be regarded as being obvious to derive the subject invention from the teaching of the Suzuki reference.

Therefore, the combination of Suzuki with Swanson does not either teach or suggest the subject matter of claims 3 and 4 and these claims are clearly patentable.

Claims 5-7 are rejected over the combination of Swanson and Gnauck. These claims are directed to the embodiment of a DSF as the compensator in the first optical path between the measured optical circuit and a port of the optical coupler. For the reasons given above relative to claims 3 and 4, these claims also are patentable and should be allowed.

Claims 8-10 are rejected as unpatentable over the combination of Swanson and Suzuki. The claims are directed to the embodiment of the invention having the optical bandpass filter for adjusting the spectrum of the beams from the light source. For the reasons given above relative to claims 3 and 4, these claims also are patentable and should be allowed.

The other cited art has been considered and is not deemed to be pertinent.

Prompt and favorable action is requested.

Respectfully submitted,

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